Health Care Financing Program Statistics

Medicare: Use of Prescription Drugs by Aged Persons Enrolled for Supplementary Medical Insurance, 1967-1977

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prescription
drug use

Published by the Health Care Financing Administration
Office of Research, Demonstrations, and Statistics

Health Care Financing Program Statistics

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Medicare—Use of Prescription Drugs by Aged Persons Enrolled for Supplementary Medical Insurance, 1967-1977

Prepared by:
Gary Grindstaff
Bennett Hirsch
Herbert Silverman

Published by
Department of Health and Human Services
Health Care Financing Administration
Office of Research, Demonstrations,
and Statistics

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Introduction

Overview

This report describes the outpatient use of prescription drugs by aged Medicare enrollees between 1967 and 1977. Trends in the patterns of use and expenditures for prescription drugs are examined in terms of the number of enrollees using prescription drugs; the number and size of prescriptions used; and average and total charges incurred. The relative contributions of these factors to the increased expenditures for prescription drugs during this period are also examined. Differences in the use of prescription drugs by persons having selected demographic characteristics are described. The report concludes with a discussion of the relative financial burden imposed on aged persons by the use of prescription drugs. The data in this report update and expand an earlier report on prescription drug use for the years 1967–1971.[1]

Hospital insurance (HI) benefits for all eligible persons aged 65 and over have been provided under Medicare since July 1966. HI covers the cost of prescription drugs when provided to enrollees as inpatients in hospitals and skilled nursing facilities. Supplementary Medical Insurance (SMI) has also been available for those who enrolled and paid a premium.[2] SMI provides reimbursement for a range of services, such as visits to and by physicians, part-time home nursing services when provided by home health agencies, ambulance services, and durable medical equipment. Reimbursement for prescription drugs obtained on an outpatient basis is not currently provided under Medicare, though it is occasionally discussed as a possible extension of Medicare coverage.

The data for this report were obtained from the Current Medicare Survey (CMS), a monthly interview survey of a probability sample of approximately 5,000 SMI enrollees. The CMS was originally designed to derive estimates of the use of medical services and charges covered by SMI. In 1967 it was expanded to include all medical services and supplies, whether reimbursable under Medicare or not. Drugs were included in the CMS even though they were not reimbursable when received in an outpatient setting. The CMS was discontinued after 1977. Thus, this is the last report on outpatient use of prescription drugs planned by the Health Care Financing Administration until data become available from other surveys.

The data were gathered through home interviews, so the estimates presented are subject to the usual limitations found in surveys of this type: incomplete information resulting from failure of recall; refusal to participate; and errors of interpretation by the sample persons, interviewers, and coders. In addition, because the estimates in this report are based on a sample of enrolled persons, sampling errors may exist. Details on the Current Medicare Survey: definitions, sample selections, and reliability of estimates are given in Appendix A.

[1] See Dennis L. Heffner, Martin Ruther, and Robert K. Mitchel, "Current Medicare Survey Report, Medical Insurance Sample, Prescription Drugs, 1967–71," *Health Insurance Statistics*, CMS-28, October 12, 1973.

[2] For more information see "Medical Insurance Enrollment, Coverage and Premiums," *Social Security Handbook*, Social Security Administration, July, 1978, p. 453.

Summary of Findings

The highlights of this report are:

Trends in Use and Expenditures for Prescription Drugs, 1967–1977

- Total prescription charges for SMI enrollees 65 years and over rose from $777 million in 1967 to $2,314 million in 1977, an overall increase of 198 percent and an average annual rate of increase of 11.5 percent. Average annual prescription charges per beneficiary rose from $41.10 to $95.70, an increase of about 133 percent over the same time period, and an average annual rate of increase of 8.8 percent.
- Of the 24 million persons enrolled in SMI in 1977, about 19 million had at least one prescription during the year. This total accounted for 80.6 percent of the enrollees.
- In 1977, the average number of prescriptions per user was 17.9. This number was 34 percent higher than the average of 13.4 prescriptions per user in 1967.
- The average charge per prescription rose from $4.00 in 1967 to $6.60 in 1977, an increase of 65 percent.
- Betweeen 1967 and 1976 the proportion of enrollees with annual prescription charges of $180 or more increased from 3.2 percent to 16.6 percent. Persons incurring charges of $180 or more in 1977 accounted for about 60 percent of all expenditures for prescription drugs by the aged.

Demographic Differences

- In 1977, persons 75 and over incurred average total charges about 20 percent greater than persons 65–74 years of age. Average charges for women were 30 percent higher than average charges for men.
- In 1977, persons in the South using prescriptions averaged more than 21 prescriptions compared to less than 18 prescriptions per beneficiary in the other regions. As a result of this, persons in the South using prescriptions averaged almost $141 in charges, more than $23 higher than in the next highest region.
- In 1977, the average charge per prescription was highest in the West ($7.70) one dollar more per prescription than in the next highest region.

Relative Out-of-Pocket Burden of Expenditures for Prescription Drugs

- Although the prescription drug price index increased 22 percent between 1967 and 1977, the proportion of annual out-of-pocket expenditures by aged SMI enrollees for prescription drugs remained constant at about 37 percent over the 1967–1977 period. Over the same period, the proportion of annual income of these beneficiaries which was devoted to prescription drug costs also remained relatively constant.

Trends in the Use and Expenditures for Prescription Drugs, 1967–1977

In 1977 aged SMI enrollees (that is, those aged 65 years

and over) spent $2,314 million for prescription drugs (Table 1). The increase from $777 million in 1967 to $2,314 million in 1977 represented an increase of 198 percent. The average annual rate of increase in total expenditures by aged SMI beneficiaries for prescription drugs from 1967 to 1977 was 11.5 percent.

The increased expenditures for prescription drugs by aged Medicare enrollees reflect three factors: higher charges for prescription drugs; the increasing number of SMI enrollees using prescription drugs; and a generally rising trend during this period in the average number of prescriptions per user. The relative contributions of these factors to the 198 percent increase in total prescription drug expenditures during the period covered by this report are discussed next.

Factors Affecting Prescription Drug Expenditures

SMI Enrollment

The number of persons 65 years and older who were enrolled for SMI increased from 18.9 million in 1967 to 24.2 million in 1977, an increase of about 28 percent (Table 1). The average annual rate of increase in SMI enrollment during this period was 2.5 percent.

TABLE 1
Aged SMI Enrollees Using Prescription Drugs, Number of Prescriptions, and Charges, 1967–1977

(In Thousands)

Year	Enrollees	Enrollees Who Used Prescription Drugs	Number of Prescriptions	Prescription Charges
1967	18,908	14,696	196,333	$776,857
1968	19,800	14,900	221,584	899,508
1969	20,307	15,604	205,551	1,008,350
1970	20,754	16,185	271,596	1,163,344
1971	21,251	16,252	260,765	1,176,284
1972	21,528	16,758	282,440	1,277,895
1973	22,040	17,675	295,552	1,396,236
1974	22,603	18,093	317,541	1,595,995
1975	23,077	18,334	315,671	1,772,775
1976	23,528	19,045	332,633	2,006,919
1977	24,174	19,461	347,613	2,314,319
	Percent Change			
1967–1977	27.9	32.4	77.1	197.9
	Average Annual Rate of Increase (In Percent)			
1967–1977	2.5	2.8	5.9	11.5

Users of Prescriptions

As shown in the following table, the proportion of aged SMI enrollees who used prescriptions did not differ significantly over the 11-year period from 1967 to 1977. The percent of users ranged between 77.7 and 80.6 percent. The average annual rate of increase in the number of aged SMI enrollees who used prescription drugs (2.8 percent) was roughly equivalent to the average annual rate of increase in SMI enrollment of 2.5 percent.

Year	Percent of Aged SMI Enrollees Who Used Prescription Drugs
1967	77.7
1968	75.3
1969	76.8
1970	78.0
1971	76.5
1972	77.8
1973	80.2
1974	80.0
1975	79.5
1976	80.9
1977	80.6

Number of Prescriptions

The number of prescriptions filled for SMI enrollees increased from about 196 million in 1967 to almost 348 million in 1977 (Table 1)—a 77 percent increase which far exceeded the growth in the number of users (about 32 percent). The average annual rate of increase during this period in the number of prescriptions filled for SMI enrollees was 5.9 percent. This rate of increase in the number of prescriptions was more than twice the rate of increase in the number of enrollees (2.5 percent) and the number of users (2.8 percent).

Prescriptions Per User

Table 2 shows that in 1967 the average number of prescriptions filled per user enrolled for SMI was 13.4. In 1977, this average was 17.9, almost a 34 percent rise since 1967. The average annual rate of increase in the average number of prescriptions per user over the 10-year period was 2.9 percent.

Charges Per User

As shown in Table 2, the average annual increases in charges incurred for prescription drugs per enrollee and per user were similar (8.8 vs 8.4). The overall increase in charges per enrollee between 1967 and 1977 was about 133 percent (from $41.10 to $95.70). Charges per user increased 125 percent (from $52.90 to $119.00).

Charges Per Prescription

The charge for each prescription rose from $4.00 in 1967 to $6.60 in 1977, a 65 percent increase (Table 2). The average annual rate of increase in charge per prescription during that time was 5.2 percent. This figure compares to an annual rate of increase of 7.3 percent in the medical price index during the same period of time (see Appendix E).

TABLE 2
Average Number of Prescriptions per Aged SMI User, Charges per Person and per Prescription, 1967–1977

Year	Prescriptions per User	Average Annual Charge		Average Charge per Prescription
		Per Enrollee	Per User	
1967	13.4	$41.10	$52.90	$4.00
1968	14.9	45.40	60.40	4.10
1969	16.1	49.70	64.60	4.00
1970	16.8	56.10	71.90	4.30
1971	16.0	55.40	72.40	4.50
1972	16.9	59.40	76.30	4.50
1973	16.7	63.40	79.00	4.70
1974	17.6	70.60	88.20	5.00
1975	17.3	76.80	96.80	5.60
1976	17.5	85.30	105.40	6.00
1977	17.9	95.70	119.00	6.60
	Percent Change			
1967–1977	33.6	132.8	125.0	65.0
	Average Annual Rate of Increase (In Percent)			
1967–1977	2.9	8.8	8.4	5.2

Relative Contribution of Factors Causing Increased Expenditures for Prescription Drugs

The key factors contributing to the increase in expenditures for prescription drugs between 1967 and 1977 and the magnitude of their contributions are presented below:[3]

Component Changes	Contribution to Increased Charges	Percent of Total Increase
Charges per Prescription	$810,629	52.7
Prescriptions per User	304,384	19.8
Users	368,581	24.0
Interaction	52,867	3.4
Total	$1,537,461	99.9

NOTE: Details do not add to totals due to rounding.

The largest portion of the increase (52.7 percent) in total charges for prescription drugs from 1967 to 1977 was because of increases in the average charge per prescription. Increases in average number of prescriptions per user accounted for 19.8 percent of the total charge increase, and increases in total users accounted for 24.0 percent of the increase. The interaction term was very small compared to the other three; it accounted for only 3.4 percent of the total charge increase in prescription drugs.

While increases in the average charge per prescription directly affect increases in total expenditures for prescription drugs and average charge per user, the average charge per prescription may itself be affected by changes in the average size of prescriptions and general price inflation.

Increases in the average charge per prescription are associated with increases in the average size of prescriptions, defined as the number of doses per prescription (Firestone, April 1975). According to the Firestone study, a steady growth in the average number of doses per prescription has taken place since 1960. The use of maintenance drugs for the management of chronic ailments such as arthritis and cardiovascular conditions has been an important part of this growth. Prescriptions for chronic conditions accounted for about 90 percent of the prescriptions filled by the aged beneficiaries. Chronic conditions used for this estimate are listed in Appendix C.

Since the CMS did not collect data on prescription size, the survey provided no direct way to test whether the hypothesized changes in prescription size occurred. But, by using data from the National Prescription Audit, a survey of 800 pharmacies which collects information on price and average prescription size, the trend in prescription size was examined for a set of maintenance drugs prescribed for some of the conditions listed in Appendix D.

Table 3 lists the various therapeutic categories and their associated drugs, including: maximum strength dosage; number of prescriptions written during the year; and the average prescription size (number of doses per prescription) for the specified drug for 1967 and 1973.[4]

The data in Table 3 indicate that in 1967 the weighted average prescription size was 36.8 doses for the maintenance drugs in the sample. By 1973 the weighted average number of doses per prescription had risen to 44.8, a 22 percent rise. These figures suggest that Firestone's hypothesis may be supportable for drugs commonly prescribed for conditions prevalent among aged SMI enrollees. If this is so, there may have been an increase between 1967 and 1973 in the average size of the prescriptions for chronic conditions.

The data show that increases between 1967 and 1977 in the average charge per prescription reflect increased quantity of medication per prescription as well as general price inflation. However, the data do not permit apportionment of their relative contributions.

Distribution of Charges

In 1977, 20.8 percent of the enrollees incurred no charges for prescription drugs. The same year 16.6 percent of the enrollees had annual prescription charges of $180 or more, accounting for almost 60 percent of total charges for prescription drugs. The remaining 62.6 percent of the beneficiaries accounted for about 40 percent of total prescription drug charges. Thus, one-sixth of the beneficiaries accounted for the major portion of all prescription drug expenditures. The same general pattern of a small proportion of prescription drug users accounting for a major share of the expenditures prevailed in each of the previous years, except that increasing drug prices have shifted the relationships upwards during the period 1967–1977. Therefore, the percentage of enrollees incurring charges of $180 or more increased five-fold between 1967 and 1977, from 3.2 to 16.6 percent. The proportion of all prescription drug expenditures incurred by this group tripled, from about one-fifth to three-fifths of the total. Because of increasing charges per prescription, it takes fewer prescriptions per user to attain a given charge class (Table 4).

[3] In this publication, the major portion of the rise in expenditures for prescription drugs is attributed to the direct effects of the three principal factors listed. The "interaction" term refers to the residual increase in drug expenditures which cannot be explained by the direct effects of the principal factors. See Appendix B for a discussion of the method used for computing the relative contributions.

[4] A number of common therapeutic categories for the aged, such as antidiabetics, hypotensives, antisenility medications, ophthalmics, etc., were selected. (See Appendix D for a list of therapeutic categories.) For each therapeutic category, the drug most frequently in use was selected. Drugs not in use in both 1967 and 1973 were not used. Thus, new drugs treating previously untreatable chronic conditions were excluded. In addition, if none of the drugs prescribed for the treatment of a given condition represented at least 10 percent of the volume of prescriptions written, the therapeutic category was dropped; only in the case of ophthalmic medications did this occur. (The selection of 1973 as the weighting year was arbitrary; 1967 could just as easily have been chosen.)

TABLE 3
Average Prescription Size for 1967 and 1973 by Selected Therapeutic Categories and Drugs

Therapeutic Categories and Drugs		Maximum Strength Dosage	1967			1973		
			Number of Prescriptions	Average Prescription Size	Weighted Prescription Size[1]	Number of Prescriptions	Average Prescription Size	Weighted Prescription Size[1]
Antispasmodics	Donnatal	1 strength tab.	2,369	53.1	2.9	3,180	56.6	3.1
Hormones	Premarin	1.25 mg.	1,929	45.2	2.0	2,639	60.5	2.7
Tranquilizers	Valium	5 mg.	3,102	41.5	9.3	13,072	49.4	11.1
Diuretics	Aldactazide	25 mg.	371	49.3	1.3	1,500	57.5	1.5
	Ser-Ap-Es	1 strength tab.	798	47.2	1.3	1,624	62.9	1.8
Antibiotics	Achromycin V	250 mg.	2,545	16.1	1.4	5,201	27.1	2.4
Analgesics	Darvon (compound 65)	65 mg.	8,377	21.9	3.2	8,395	31.0	4.5
	Empirin with codeine	30 mg.	7,653	22.5	4.0	10.236	24.8	4.4
Anti-inflamatories	Indocin	25 mg.	3,324	41.3	2.8	3,996	53.9	3.7
Hypotensives and Cardiovasculars	Aldomet	250 mg.	405	62.6	3.1	2,842	72.1	3.5
	Pavabid	150 mg.	399	43.7	1.1	1,516	61.3	1.6
	Quinadox (sulfate)	1 strength tab.	27	45.1	0.1	63	50.7	0.1
	Lanoxin	.25 mg.	758	59.3	2.6	2,597	57.8	2.6
Antidiabetics	Orinase	500 mg.	1,554	68.4	1.7	1,483	71.6	1.8
Total		—	33,611	—	36.8	58.344	—	44.8

Source: From National Prescription Audit: Data furnished by Paul Dickens and Vince Gardner, Drug Studies Branch, Division of Health Insurance Studies, Social Security Administration, now in the Health Care Financing Administration.
[1] Each drug is weighted by its average prescription size in 1973.

Table 5 shows that the proportion of prescriptions costing $6.00 or more increased from 26.9 percent in 1973 to 45.3 percent in 1977, a marked change over a five-year period. The proportion of total charges for prescription drugs accounted for by this group of prescriptions increased from 50.9 percent to 70.2 percent over the same period. Also, the number of prescriptions required to exceed $180 in total drug charges decreased from about 58 in 1967 to 38 in 1977 (Table 4).

Demographic Differences in the Use of Prescription Drugs

Table 6 shows that during the period from 1973 to 1977, the use of prescriptions by SMI enrollees differed by age, sex, and area of residence.[5]

The same general demographic relationships found in earlier CMS data (1967 to 1971) were observable during the 1973–1977 period. In each of the 5 years shown in Table 6, the average number of prescriptions for users aged 75 and over was higher than the average number of prescriptions for users aged 65–74.

Women used more prescriptions than men used in each of the five years. In 1977 they used 28 percent more—19.6 prescriptions for women and 15.3 for men. Enrollees in the South purchased more prescriptions per user every year than did enrollees in any other region. In 1977 they used from 20 to 41 percent more than users in other regions of the country.

The average charge per prescription did not differ significantly by age or sex. Geographically, the average charges per prescription were highest in the West throughout the period 1973–1977.

Over the period 1973–1977 the average annual charges per user were greater for women than for men and for the 75 and over age group as compared to the 65–74 age group. These data also relate to the average number of prescriptions per user. The average annual charges per user in the South were higher than in the other regions, reflecting the higher number of prescriptions per user.

Relationship of Prescription Drug Costs to Other Medical Expenses and to Enrollee Income

Out-of-Pocket Expenses

Prescription drug charges, as a proportion of total medical charges for SMI enrollees, did not change

[5] Estimates of the average number of prescriptions per user and average annual prescription drug charges per user in Table 6 differ slightly from the Table 2 estimates, because of updating and correction procedures performed on the CMS data base between the times the two estimates were derived.

significantly between 1967–1977 (Table 7). Since 1968, the proportion has ranged between 19.5–22.8 percent. The difference between the total charges for medical services and the estimated reimbursement for SMI covered services may be regarded as "out-of-pocket expenses." The proportion of the enrollees' out-of-pocket expenses for prescription drugs has not changed much; since 1968 the proportion has ranged between 36 and 39 percent. Prescription drugs may be less of an individual burden than they might at first appear because out-of-pocket expenses for prescription drugs may be periodically reimbursed by employer-employee plans, religious and charitable organizations, and other third parties, such as the Medicaid programs.

Relationship of Prescription Drug Costs to Enrollee Income

The average incurred charge per SMI beneficiary per year for prescription drugs as a proportion of CMS estimates of median annual income of SMI beneficiaries did not change significantly from 1969 to 1977. This is shown in Table 8.

Although the changes were not statistically significant, there is some suggestion of a decline in the proportion of income spent for prescription charges. Similar computations with other measures of income also showed this trend, although with different estimates of the percentage itself.

TABLE 4
Percentage Distribution of Aged SMI Enrollees and Total Charges for Prescription Drugs, and Prescriptions per User by Amount of Charges per Person, 1967–1977

Annual Charges	1967[1]	1968[1]	1969[1]	1970[1]	1971[1]	1972	1973	1974	1975	1976	1977
	Percent of Enrollees										
No Charge[2]	22.3	25.3	24.7	23.8	25.4	23.4	21.3	21.0	21.9	20.4	20.8
$ .01–9.99	16.1	13.6	13.1	12.7	11.6	11.2	10.8	9.6	9.0	8.2	7.9
10.00–19.99	11.8	10.9	9.7	9.2	9.2	8.8	9.3	9.4	8.2	8.2	8.0
20.00–29.99	8.9	8.2	8.2	7.2	6.5	7.3	7.5	6.4	6.8	6.9	6.6
30.00–39.99	7.2	6.6	6.4	5.9	6.1	6.4	6.4	5.9	5.2	5.4	5.3
40.00–59.99	9.8	9.3	9.3	9.5	9.6	9.2	9.3	9.1	9.4	9.5	8.4
60.00–79.99	7.3	6.7	7.1	6.9	8.2	7.3	7.8	8.0	7.0	7.1	6.8
80.00–99.99	4.7	5.2	5.6	5.9	5.4	5.9	5.8	5.9	5.8	5.8	5.0
100.00–139.99	6.0	6.4	6.6	7.7	6.8	7.8	7.4	8.7	8.6	8.1	9.1
140.00–179.99	2.6	3.1	4.2	4.0	4.0	5.0	5.5	5.2	5.8	5.9	5.7
180.00 or more	3.2	4.8	5.2	7.3	7.2	7.7	8.9	10.7	12.5	14.6	16.6
	Percent of Charges										
$ .01–9.99	2.1	1.6	1.4	1.2	1.2	1.0	1.0	.8	.7	.6	.5
10.00–19.99	4.2	3.5	2.9	2.3	2.5	2.2	2.2	2.0	1.6	1.4	1.2
20.00–29.99	5.3	4.4	4.1	3.2	2.9	3.0	2.9	2.3	2.2	2.0	1.7
30.00–39.99	6.1	5.0	4.5	3.7	3.9	3.7	3.5	2.9	2.3	2.2	1.9
40.00–59.99	11.8	10.0	9.3	8.4	8.6	7.7	7.2	6.3	6.0	5.5	4.4
60.00–79.99	12.3	10.3	9.9	8.5	10.3	8.5	8.5	7.9	6.3	5.8	4.9
80.00–99.99	10.2	10.2	10.0	9.5	8.7	8.9	8.1	7.6	6.7	6.1	4.7
100.00–139.99	17.2	16.6	15.5	16.3	14.4	15.6	13.9	14.7	13.1	11.2	11.4
140.00–179.99	10.0	10.8	13.5	11.5	11.3	13.5	13.9	11.7	11.9	11.0	9.4
180.00 or more	20.7	27.7	29.0	35.5	36.3	35.9	38.9	43.9	49.2	54.2	59.9
	Prescriptions per User in Each Charge Class										
No Charge	[3]	[3]	4.0	5.0	5.1	5.9	6.2	5.6	6.7	10.2	3.4
$ .01–9.99	2.0	2.0	2.5	2.5	2.5	2.7	2.4	2.1	2.1	2.3	2.3
10.00–19.99	4.6	4.7	5.1	4.8	4.8	4.4	4.5	4.3	4.4	4.0	3.8
20.00–29.99	7.5	7.3	7.7	7.7	7.2	7.1	6.5	6.6	6.3	5.5	5.8
30.00–39.99	9.9	9.6	10.6	9.8	10.0	9.0	9.0	8.4	8.6	7.5	6.9
40.00–59.99	13.8	12.9	13.4	12.8	12.5	11.9	12.0	11.2	10.9	10.3	9.5
60.00–79.99	17.6	18.4	17.8	16.8	16.6	16.7	16.4	15.9	15.4	12.7	12.1
80.00–99.99	22.1	22.0	22.4	21.2	20.6	20.0	19.0	18.1	17.5	16.5	16.9
100.00–139.99	28.3	27.7	28.2	27.7	24.9	26.3	24.4	23.3	22.2	21.5	19.0
140.00–179.99	34.9	36.0	35.2	35.3	32.8	32.7	31.9	30.4	28.2	26.6	24.6
180.00 or more	57.7	55.8	58.9	54.0	51.2	53.1	50.8	51.1	44.7	45.2	38.2

[1] *Current Medicare Survey Report,* Medical Insurance Sample, Prescription Drugs, 1967–71.
[2] Includes enrollees who received prescription drugs without charge beginning with 1969.
[3] Not available.

TABLE 5
Percentage Distribution of Prescriptions and Charges by Charge per Prescription for Aged SMI Enrollees, 1973–1977

Charges per Prescription	Number of Prescriptions		Total Charges	
	Percent	Cumulative Percent	Percent	Cumulative Percent
All Prescriptions	100.0	—	100.0	—
1973				
No Charge	4.1	4.1	—	—
$ .01–1.99	12.0	16.1	3.6	3.6
2.00–2.99	15.8	31.9	8.2	11.8
3.00–3.99	17.0	48.9	12.4	24.2
4.00–5.99	24.2	73.1	25.0	49.2
6.00–9.99	20.4	93.5	32.7	81.9
10.00 or more	6.5	100.0	18.2	100.1
1974				
No Charge	3.0	3.0	—	—
$ .01–1.99	10.4	13.4	2.9	2.9
2.00–2.99	14.9	28.3	7.3	10.2
3.00–3.99	16.2	44.5	11.1	21.3
4.00–5.99	25.1	9.6	24.4	45.7
6.00–9.99	23.1	92.7	35.0	80.7
10.00 or more	7.4	100.0	19.4	100.1
1975				
No Charge	3.4	3.4	—	—
$ .01–1.99	8.6	12.0	2.2	2.2
2.00–2.99	13.1	25.1	5.8	8.0
3.00–3.99	14.7	39.8	9.1	17.1
4.00–5.99	23.6	63.4	20.6	37.7
6.00–9.99	25.1	88.5	34.0	71.7
10.00 or more	11.6	100.1	28.3	100.0
1976				
No Charge	3.2	3.2	—	—
$ .01–1.99	7.4	10.6	1.8	1.8
2.00–2.99	10.5	21.1	4.3	6.1
3.00–3.99	13.7	34.8	7.9	14.0
4.00–5.99	24.7	59.5	20.1	34.1
6.00–9.99	25.8	85.3	32.7	66.8
10.00 or more	14.7	100.0	33.2	100.0
1977				
No Charge	2.8	2.8	—	—
$ .01–1.99	5.6	8.4	1.3	1.3
2.00–2.99	8.6	17.0	3.2	4.5
3.00–3.99	11.9	28.9	6.3	10.8
4.00–5.99	25.9	54.8	19.1	29.9
6.00–9.99	26.9	81.7	31.0	60.9
10.00 or more	18.4	100.1	39.2	100.1

TA8LE 6
Average Number of Prescriptions per Aged SMI User, Average Charge per Prescription and User, by Demographic Characteristics, 1973–1977

Age, Sex and Region	1973	1974	1975	1976	1977
	Average Number of Prescriptions per User				
All Persons	16.8	17.5	17.3	17.5	17.9
Age					
65–74	15.0	16.2	15.8	15.7	16.2
75 and over	19.1	19.3	19.1	19.8	20.2
Sex					
Men	15.5	15.1	15.1	16.0	15.3
Women	17.6	19.1	18.5	18.4	19.6
Census Region					
Northeast	14.8	15.1	15.5	15.7	16.2
North Central	16.9	18.8	17.1	18.0	17.9
South	19.4	19.8	19.2	19.3	21.1
West	14.5	15.1	16.0	15.4	14.2
	Average Charges per Prescription				
All Persons	$4.70	$5.00	$5.60	$6.00	$6.60
Age					
65–74	4.80	5.10	5.70	6.00	6.80
75 and over	4.60	4.90	5.60	6.00	6.50
Sex					
Men	4.80	5.20	5.70	6.10	6.60
Women	4.70	5.00	5.60	6.00	6.70
Census Region					
Northeast	4.60	5.10	5.50	6.10	6.20
North Central	4.60	4.90	5.40	5.70	6.50
South	4.60	4.90	5.60	5.90	6.70
West	5.40	5.60	6.30	6.90	7.70
	Average Annual Prescription Drug Charges per User				
All Persons	$79.40	$88.20	$96.80	$105.40	$119.00
Age					
65–74	72.70	83.10	89.70	95.40	109.70
75 and over	88.10	94.80	106.40	119.50	131.80
Sex					
Men	73.60	77.80	85.50	98.50	100.70
Women	83.00	94.80	103.70	109.60	131.00
Census Region					
Northeast	68.60	76.80	84.90	95.80	100.00
North Central	78.10	91.20	91.90	103.10	116.70
South	89.80	96.50	107.50	114.00	140.60
West	77.80	84.30	101.10	106.40	109.60

TABLE 7
Relationship of Prescription Drug Charges Incurred by Aged SMI Enrollees to Other Medical Expenses, 1967–1977

(In Thousands)

Year	Charges for Prescription Drugs	Total Charges for Medical Services	Estimated Reimbursement by SMI	Out-of-Pocket Expenses	Charges for Prescription Drugs as Percent of Total Charges	Charges for Prescriptions as Percent of Out-of-Pocket Expenses
1967	$788,905	$3,158,222	$1,382,552	$1,775,670	25.0	44.4
1968	903,270	4,032,410	1,615,726	2,416,685	22.4	37.4
1969	1,014,863	4,669,716	1,895,778	2,773,438	21.7	36.6
1970	1,163,344	5,102,293	2,104,210	2,998,083	22.8	38.8
1971	1,176,284	5,213,298	2,102,411	3,200,886	22.6	36.7
1972	1,286,850	5,678,096	2,217,311	3,461,385	22.7	37.2
1973	1,410,457	6,305,896	2,408,667	3,897,219	22.4	36.2
1974	1,596,732	7,332,668	2,958,715	4,373,953	21.8	36.5
1975	1,772,775	8,959,073	3,979,477	4,979,596	19.8	35.6
1976	2,006,919	10,061,879	4,448,201	5,613,678	20.0	35.8
1977	2,314,319	11,874,802	5,487,081	6,387,721	19.5	36.2

NOTE: Charges for prescription drugs in this table are slightly different from prescription charges in Table 1 because of different derivations of the weights used to obtain these estimates.

TABLE 8
Relationship of Average Drug Expenditures to Median Income for SMI Enrollees, 1969–1977

Year	Average Annual Incurred Charges per Enrollee for Prescription Drugs	CMS Estimate of Median Income per SMI Enrollee	Prescription Drug Expenditures as Percent of Median Income
1967	$41.10	NA	NA
1968	45.40	NA	NA
1969	49.70	$2,021	2.5
1970	56.10	2,327	2.4
1971	55.40	2,520	2.2
1972	59.40	2,799	2.1
1973	63.40	3,241	2.0
1974	70.60	3,389	2.1
1975	76.80	4,773	1.6
1976	85.30	5,270	1.6
1977	95.70	5,672	1.7

NOTE: The nonresponse rate to the CMS question about income was about 25 percent.

Conclusion

Between 1967 and 1977, expenditures for prescription drugs by the aged nearly tripled. During the same period, charges for other medical services quadrupled. Thus, charges for prescription drugs as a percentage of charges for all medical services decreased from 25.0 to 19.5 percent. Appendix E gives Consumer Price Indices (CPI) for selected services or items. Of particular interest is the large increase of 102.4 percent in the CPI for medical care from 1967 to 1977, as compared to the much smaller increase for prescription drugs, 22.1 percent. Over the same period, statutory and automatic increases in Social Security Old Age Survivors Disability Health Insurance (OASDHI) benefits (a significant source of income for the aged) apparently more than kept pace with increases in medical care and prescription drug prices. Even with increased use of prescription drugs, the increase in benefits was greater than the increase in average incurred charges per enrollee over the same period.

Charges for prescription drugs by aged SMI beneficiaries did not become, as did other medical services, an increasing burden on the income of the aged person, between 1967 and 1977. Nevertheless, in 1977, about one aged SMI enrollee in six spent an average of $15 or more each month on prescription drugs, accounting for 60 percent of all outpatient drug expenditures. This figure represents 3.2 percent of the median income, almost double the average for all SMI enrollees. In 1967 only about one aged SMI enrollee in thirty spent $15 or more each month on prescription drugs. This amount represents a major recurring expense item for a significant minority of Medicare beneficiaries. This fact would suggest that this group of high users of prescription drugs should be the primary concern when consideration is given to extending the deductible and coinsurance arrangements of Medicare coverage to prescription drugs. The drug deductible, as in the case of the SMI premium, might be linked to increases in social security benefits.

Acknowledgments

This report was written by Gary F. Grindstaff, previously with the Office of Research, Health Care Financing Administration; Bennett Hirsch, Office of Research, Health Care Financing Administration; and Herbert A. Silverman, Chief, Program Statistics Branch, Office of Research, Health Care Financing Administration. The technical appendix was prepared with the assistance of Robert K. Mitchel. This report is one of a series prepared in the Office of Research, Judith Lave, Director, to provide a description and analysis of the use and cost of health care services used by the beneficiaries of the Medicare and Medicaid programs administered by HCFA. The report was written under the administrative supervision of Allen Dobson, Director, Division of Beneficiary Studies.

Reference

Firestone, John M. *Prescription Size Index,* 1974, unpublished report to the Pharmaceutical Manufacturers Association, Washington, D.C., April 1975.

Appendix A

Technical Supplements

Definitions

Prescription drugs—Medicines that by law require a prescription from a physician before they can be sold. Medicare hospital insurance pays for almost all prescription drugs when they are furnished to beneficiaries confined to a hospital or skilled nursing facility, but these prescription drugs were not included in the Current Medicare Survey. Prescription drugs given by physicians to SMI beneficiaries who are outpatients or patients in nursing homes were included in the survey.

Prescription drugs must be filled or refilled by registered pharmacists in retail drug stores or hospital clinics, or they may be dispensed in person, or by telephone, by physicians, with or without charge. Prescriptions were included in the Current Medicare Survey but are not reimbursed by the SMI program.

Prescription drug charge—Estimated amount charged for prescription drugs. Some of these charges were paid by third parties or welfare programs.

Statistically significant—Significance at the .05-level; that is, the probability of an event occurring by chance is equal to or less than 1 in 20. A comparative statement between computed data (for example, greater, smaller, increased, or decreased) is made only when the difference between them meets this level of estimated confidence.

Source of Data

The Current Medicare Survey (CMS), which was terminated following the 1977 sample year, used a three-stage probability sample design. The sample represented all SMI enrollees in the 50 States and in the District of Columbia. The first two stages resulted in the selection of the primary sampling units (PSUs). From 1967 to 1972 there were 104 PSUs; from 1973 to 1975 there were 111 PSUs; and there were 117 PSUs in 1976 and 1977. Each PSU consisted of a standard metropolitan statistical area (SMSA), a single county or several adjacent counties. Within these units, a digital systematic sample of persons was selected from persons enrolled in the SMI program based on the last two digits of the health insurance claim number.

As shown in the following table, the sample size increased yearly from 1967 to 1975 by about 130 persons, reflecting the increasing SMI enrollment, and because the sampling fraction was held constant at 1 in 4,000. In 1976 and 1977, the sampling fraction was reduced to 1 in 5,000.

Year	CMS Sample Size
1967	4,560
1968	4,849
1969	4,957
1970	5,047
1971	5,122
1972	5,267
1973	5,448
1974	5,523
1975	5,601
1976	4,613
1977	4,746

Sample persons were selected for interviews starting in October of each year and remained in the survey for 15 months. This 15-month cycle was used because medical expenses incurred by an individual in the last 3 months of a calendar year which are applied to the deductible for that year are carried over and applied to the deductible for the next calendar year. Since prescription drugs used outside of a covered inpatient setting are not covered by Medicare, the carryover is not applicable to expenses incurred for outpatient drugs.

The sample consisted of two groups: 1) a basic group of individuals who would normally remain in the sample for 15 months, and 2) a small incremental sample drawn to include persons attaining age 65 and added to the sample each month. In addition, a sample of persons who had elected not to enroll for Supplementary Medical Insurance was selected. The sample of non-enrolled persons was interviewed once each month for 15 months, as was the basic sample group. The CMS sample, which formed the base for this report, included only persons enrolled for Supplementary Medical Insurance some time during the year.

Data from the sample persons were collected by means of the monthly personal interviews. The interviews, conducted by the Bureau of Census, provided information about the use of medical care and related services during the preceding month.

On the first visit, and each interview thereafter, the enrollee was given a diary form and was encouraged to note therein the medical care and services (including prescription drugs) he received during the current month. The interviewer collected the diary the following month at the end of the interview. During the interview, the respondent could consult his diary form or his drug bill, while the interviewer recorded the information in the prescription medicine section of the questionnaire (Appendix F).

The basic items of information obtained included: name of respondent, date of physician visits, conditions treated, number and kind of prescriptions filled or refilled, the total amount of the bill, and the source of payment. Where no information on charges was available, an input procedure was used that assumed that charges would be the same for similar services rendered in the same area. The number of prescriptions for which it was necessary to estimate charges varied in a given month from 20 to 25 percent. The estimate was made by means of a computer program which selected the last reported prescription charge of another sample beneficiary living in the same region. Information about the characteristics of the sample person, such as age, marital status, and living arrangements, was also collected. Additional information relating to the Supplementary Medical Insurance program was obtained on an *ad hoc* basis.

Reliability of Estimates

The estimates in this report are based on a sample of enrolled persons. Therefore, they may differ somewhat from the figures that would have been obtained if the same data had been collected for the entire universe of enrolled persons, using the same collection procedures. The data may also differ from the results of statistical compilation of data from the administrative records. As in any data collection, the results are subject to errors of response, reporting, processing, and sampling variability.

The estimates developed from the CMS are based in part on the memory or knowledge of each of the respondents. The memory factor in data derived from field surveys probably produces underestimates, because the tendency is to forget minor or irregular items. On the other hand, the survey process in the CMS involved successive visits to the same sample enrollees who used diaries for a number of months, so there may have been less of this tendency to forget.

The standard error is primarily a measure of sampling variability, that is, of the variations that occur by chance because a sample rather than the whole universe was used. As calculated for this report, the standard error also partially measures the effect of response errors, but does not measure any systematic biases in the data. The chances are about 68 out of 100 that an estimate from the sample would differ from the result for the entire universe by less than the standard error using the same procedures and methods. The chances are about 95 out of 100 that the differences would be less than two times the standard error. The chances are about 99 out of 100 that the differences would be less than two and one-half times the standard error. To derive standard errors that would be applicable to the wide variety of items presented and that could be prepared at moderate cost, a group of items was selected for which approximations to the standard errors have been estimated. It is possible, using a number of assumptions, to generalize the standard errors of estimates for charge data and for medical services.

The following generalized tables of standard errors of numbers of persons, dollar amounts, and medical services provide an indication of the magnitude of the standard errors rather than the standard error of any specific estimate. For ease in some uses of the data, the relative variance of the estimate is also shown. This is the estimated variance divided by the square of the estimate. To obtain standard errors for computing 95 and 99 percent confidence intervals, multiply the standard errors given in the following tables by 2 and 2.5, respectively.

Standard errors to compute a 68 percent confidence interval for estimates of annual total prescription drug charges and annual total number of prescriptions with known charge for all SMI enrollees requiring prescriptions in any year from 1967 to 1972 can be estimated by taking 3 percent of either total drug charges or total prescriptions filled. To estimate the standard error of prescriptions per user, charges per user or enrollee, or charges per prescription drug, divide these averages by 20. Tables A and B present standard errors for the numbers and percentages of enrollees having various program or demographic characteristics for the period 1967–1972.

TABLE A
Approximate Standard Error and Relative Variance of Estimates of Number of Enrollees Having Various Program or Demographic Characteristics, 1967–1972.

(68 Chances out of 100)

Size of Estimate (in Thousands)	Standard Error (in Thousands)	Relative Variance
500	45	.0100
1,000	65	.0042
1,500	80	.0028
2,000	90	.0020
2,500	95	.0014
3,500	110	.0009
5,000	125	.0006
7,500	140	.0004
10,000	145	.0002
12,500	140	.0001
15,000	125	.0001

TABLE B
Approximate Standard Error of Estimates of Percentages Based on Persons, 1967–1972.

(68 Chances out of 100)

Type of Estimate	Denominator of Percentage				
Enrollees (in Thousands)	300	1,000	2,000	7,500	17,500
Estimated Percentage	Standard Error of Percentage				
2 or 98	1.7	0.9	0.6	0.3	0.2
5 or 95	2.6	1.5	1.0	0.5	0.4
10 or 90	3.6	2.0	1.4	0.7	0.6
25 or 75	5.2	2.9	2.1	1.0	0.8
50	6.0	3.4	2.4	1.2	0.9

Between 1972 and 1973 a change was made in the Primary Sampling Units (PSUs) for the Census Bureau's Current Medicare Survey based on differences in the population distribution between 1960 and 1970. It became necessary to adjust the old standard errors to correspond to the new Current Medicare Survey sample, which was based in part on PSUs. Standard errors for estimates of charges for prescription drugs and number of prescription drugs filled are shown in Tables C, D, E, and F. Estimates of appropriate standard errors for 1973–1977 can be made from these four tables.

Table C has standard errors for enrollee estimates; Table D shows standard errors for prescription charges; Table E has standard errors for services or prescriptions filled; and Table F indicates standard errors for percentage estimates.

TABLE C
Approximate Standard Error and Relative Variance of Estimates of Number of Enrollees Having Various Program or Demographic Characteristics, Current Medicare Survey, 1973–1977

(68 Chances out of 100)

Size of Estimate (in Thousands)	Standard Error (in Thousands)	Relative Variance
100	25	.0625
500	55	.0121
1,000	75	.0056
10,000	200	.0004
15,000	200	.0002
20,000	200	.0001

TABLE D
Approximate Standard Error and Relative Variance of Estimates of Charges for Prescription Drugs, Current Medicare Survey, 1973–1977

(68 Chances out of 100)

Size of Estimate (in Millions)	Standard Error (in Millions)	Relative Variance
100	10	.0100
300	15	.0025
600	25	.0017
1,000	35	.0012
3,000	80	.0007

TABLE E
Approximate Standard Error and Relative Variance of Estimates of Services or Prescriptions Filled, Current Medicare Survey, 1973–1977

(68 Chances out of 100)

Size of Estimate (in Millions)	Standard Error (in Millions)	Relative Variance
1	0.5	.2500
5	1.0	.0400
10	1.5	.0225
50	3.0	.0036
100	5.0	.0025
500	15.0	.0009
1,000	20.0	.0004

TABLE F
Approximate Standard Error of Estimates of Percentages Based on Persons, Charges for Prescriptions, and Prescriptions Filled, Current Medicare Survey, 1973–1977

(68 Chances out of 100)

Type of Estimate	Denominator of Percentage						
Enrollees (in Thousands)	—	100	300	1,000	3,000	10,000	20,000
Prescription Charges (in Millions)	—	—	30	100	500	1,000	2,000
Prescriptions Filled (in Millions)	1	3	10	30	100	300	600
Estimated Percentages	**Standard Error of Percentage**						
2 or 98	6.3	3.6	2.0	1.1	0.6	0.3	0.3
5 or 95	10.0	5.6	3.1	1.7	1.0	0.5	0.5
10 or 90	13.7	7.6	4.2	2.4	1.3	0.7	0.7
25 or 75	19.5	11.2	6.1	3.5	1.9	1.1	0.9
50	22.5	12.8	7.1	4.0	2.2	1.2	1.1

Examples of Computations of Standard Errors

Linear interpolation may be used to estimate the standard error of numbers not presented specifically in the tables. Illustration: as shown in Table 1, beneficiaries over 65 years of age used prescriptions whose charges amounted to $2,314,319,000 during 1977. Reading Table F, one finds:

Estimate	Standard Error
$1,000,000,000	$35,000,000
3,000,000,000	80,000,000

Linear interpolation indicates that the standard error is approximately $64,572,000; we may be 68 percent confident that total SMI charges for prescriptions were between $2,249,747,000 and $2,378,891,000 in 1977. Similar calculations may be made for prescriptions or percentages using Tables G and H, respectively.

Standard Error of Percentages

Use Table H to determine the standard error of a percentage. Illustration: as shown in Table 6, an estimated 21.9 percent of medical insurance enrollees incurred no charge for prescription drugs during 1975. The denominator, persons ever enrolled for medical insurance, was 23,077,000 (Table 1). Reading Table H, an estimated 21.9 percent with a denominator of 23,077,000 persons has a standard error of 0.9 percent. Thus, a 68 percent confidence interval for the percent of medical insurance beneficiaries ever enrolled in that year who incurred no charge for prescription drugs, is 21.0 to 22.8 percent. Sixty-eight percent of the confidence intervals created in this manner would include the percentage of interest.

Standard Error of Averages

To estimate the standard error of an average, the average should be multiplied by the square root of the sample of the relative variance of the average's numerator and denominator. Illustration: As indicated in Table 2, beneficiaries spent an average of $5.60 per prescription in 1975. That is $1,772,775,000 divided by 315,671,000 prescriptions. From Table F, the relative variance is $1,772,775,000 is about 0.00102 while from Table G the relative variance of 315,671,000 prescriptions is about 0.0020. Multiplying the average ($5.60) times the square root of the sum of 0.00102 and 0.0020 yields a standard error of about $.30; thus, a 68 percent confidence interval is $5.20 to $5.80 per prescription during 1975.

Standard Error of Differences

To estimate the standard error of the difference of any two estimates (A-B, where A and B are estimates of totals, averages, percentages, etc.), one calculates the square root of the sum of the squares of the standard errors of the two estimates. In symbols, the estimated standard error of A-B is:

$$SE_{A-B} = \sqrt{SE_A^2 + SE_B^2}$$

Illustration: As shown in Table 2, an average of 17.3 prescriptions were written for users with all conditions in 1975, while an average of 13.4 prescriptions were written for users with all conditions in 1967. The difference A-B = 17.3 − 13.4 = 3.90 prescriptions. The standard error of A = 315,671,000/118,334,000 is about .14 (see Tables E and G) while the standard error of B = 196,333,000/14,696,000 = 13.4 is about .67. The standard error of A-B is therefore computed as:

$$SE_{(A-B=3.90)} = \sqrt{(.74)^2 + (.67)^2 = 1.00}$$

One may be 68 percent confident that the true average difference between the two groups lies in the interval 2.90 to 4.90 (that is, 3.90 + 1.00).

Appendix B

Method for Computing Relative Contributions to the Increase in Expenditures for Prescription Drugs Between 1967 and 1977

At any given time, the total charges for prescription drugs are equal to:

Average charge per prescription × average number of prescriptions per user × total users

Algebraically, the total charges in any base year, t_0, may be represented as:

$$(TE)_0 = P_0Q_0U_0 \qquad (1)$$

where: TE = Total charges
P = Average charge per prescription
Q = Average number of prescriptions per user
U = Total users.

At a later point in time, t_1, reflecting changes in P, Q, U, the total charges may be represented as:

$$(TE)_1 = (P_0 + \Delta P)\,(Q_0 + \Delta Q)\,(U_0 + \Delta U) \qquad (2)$$

The difference in total charges between the two points in time, representing the actual changes in total charges, may be expressed as:

$$(TE)_1 - (TE)_0 = (P_0 + \Delta P)\,(Q_0 + \Delta Q)\,(U_0 + \Delta U) - P_0Q_0U_0 \qquad (3)$$

by algebraic manipulation, the increase in total charges becomes:

$$\Delta(PQU) = \Delta PQ_0U_0 + P_0\Delta QU_0 + P_0Q_0\Delta U + \Delta P\Delta QU_0 + P_0\Delta Q\Delta U + \Delta PQ_0\Delta U. + \Delta P\Delta Q\Delta U. \qquad (4)$$

The first three terms of equation (4) represent the effect of changes in each of the three factors (charges, prescriptions, and users) alone. The last four terms of equation (4) comprise a residual factor involving the interaction of the other three variables whose absolute value, as a consequence of the equation's mathematical properties, grows larger as the time interval between t_0 and t_1 increases. In order to minimize the interaction effect the equation was solved for each of the year-to-year intervals covered in this study, for example, 1967–1968, 1968–1969, etc., and the individual results were summed.

Appendix C

Listing of Selected Chronic Conditions

Anemia, iron deficiency anemia
Arthritis, bursitis, rheumatism, lumbago
Benign neoplasms
Diabetes
Diseases of genito-urinary system (bladder, kidney, prostate, etc.)
Diseases of skin (hives, boils, psoriasis, eczema)
Glaucoma, cataracts
Goit, goiter
Hay fever, asthma, emphysema, sinusitis, bronchitis
Heart disease (angina, angina pectoris, rheumatic heart)
Hernia
High or low blood pressure
Ill defined conditions, for example, sleeplessness, shortness of breath, muscle spasms, debility, undue fatigue, vitamin deficiency, visual impairments, ambulatory difficulties, muscular incoordination, lack of manual control, pains, swelling, stiffness, numbness of limbs or joints, vertigo, fainting
Malignant neoplasms
Mental disorders
Other diseases of digestive system (liver, pancreas, nervous stomach, indigestion)
Overweight or underweight
Parkinsonism, epilepsy, neuritis, neuralgia, sciatica, migraine headaches
Phlebitis, blood clots, arteriosclerosis
Senility
Stomach ulcer, (peptic or duodenal)
Tuberculosis

Appendix D

Some Major Therapeutic Categories of the Aged and Associated Common Medications

Therapeutic Categories	Drugs
Analgesics	Darvon (non-narcotic) Empirin w/codeine (narcotic)
Antibiotics	Achromycin V
Antidiabetics	Orinase (artificial insulin)
Anti-Inflammatories	Indocin
Antispasmodics	Donnatal
Diuretics	Aldactazide Ser-Ap-Es (also a hypotensive)
Hormones	Premarin (conjugated estrogen)
Hypotensives and Cardiovasculars	Ser-Ap-Es (also a diuretic) Aldomet Pavabid Quinadox sulfate Lanoxin
Tranquilizers	Valium

Source: Derived from the National Prescription Audit by Paul Dickens and Vince Gardner, Drug Studies Branch, Division of Health Insurance Studies, Office of Research and Statistics, Social Security Administration.

Appendix E

Selected Consumer Price Indices

Year	All Items[1]	All Services[1]	Medical Care[1]	Prescription Drugs Only[2]
1967	100.0	100.0	100.0	100.0
1968	104.2	105.2	106.1	98.3
1969	109.8	112.5	113.4	99.6
1970	116.3	121.6	120.6	101.2
1971	121.3	128.4	128.4	101.3
1972	125.3	133.3	132.5	100.9
1973	133.1	139.1	137.7	100.5
1974	147.7	152.1	150.5	102.9
1975	161.2	166.6	168.6	109.3
1976	170.5	180.4	184.7	115.2
1977	181.5	194.3	202.4	122.1
Percent Increase (1967–1975)	81.5	94.3	102.4	22.1

[1] Source: U.S. Bureau of Labor Statistics, Monthly Labor Review.

[2] "This CPI measures changes in price over time for a specific, weighted, periodically updated sample of prescription items (that is, specifically defined kinds of retail transactions). It is not, however, as accurate as it might be in measurement of the changes in cost to the consumer of drug therapy because the contents of the sample do not keep pace with the changes in physician prescribing habits. The new drugs which come onto the market (often at higher prices than the drugs they replace) do not result in a change in the CPI for prescription items until their commercial importance becomes overwhelming. When a new drug is added, only price changes subsequent to its inclusion are reflected in the index. The Bureau of Labor Statistics assumes in its preparation of the index that the increased cost of the new drug over the product it replaces is due only to quality improvements." *Medical Expenditures, Prices, and Costs: Background Book,* Office of Research and Statistics, Social Security Administration, 1973.

Section V – PRESCRIPTION MEDICINES

Now we have some questions about prescription medicines

1a. During the month of –– did you get any medicine prescribed by a doctor? ☐ Y ☐ N (2a)

b. How many prescriptions did you get in ––? ..... _____ Number (Fill Table 6, then ask (2a))

2a. (Besides the prescriptions we have talked about) During the month of –– did you get any medicines from a pharmacist or drug store that were prescribed by a telephone call from a doctor? ☐ Y ☐ N (3a)

b. How many prescriptions of this kind did you get in ––? ..... _____ Number (Fill Table 6, then ask (3a))

3a. (Besides the prescriptions we have talked about) During the month of –– did you have any prescriptions refilled? ☐ Y ☐ N (4a)

b. How many refills did you get in ––? ..... _____ Number (Fill Table 6, then ask (4a))

4a. (Besides the prescriptions we have talked about) During the month of –– did you get any medicine directly from a doctor? ☐ Y ☐ N (5)

b. How many medicines did you get from a doctor in ––? ..... _____ Number (Fill Table 6, then fill (5))

5. *Enter the total number of prescriptions from 1–4. If no prescriptions enter 0 and end interview OR fill section VI if applicable.* Code _____ Total

6. TABLE FOR PRESCRIPTIONS – *Fill 1 line for each prescription or refill.*

Code	For what condition(s)? (*List condition and complete questions 6b–6e for each line*) (a)	Code	What is the number of the prescription for . . . medicine? (b)	What date was it filled? (c) Code	How much did it cost? (d) Dollars	Cents	(*If bill not received, ask*) Who will pay for it? (*If bill received, ask*) Who paid (will pay) for it? (*Mark one box only*) (e)
	(1)		_____ ☐ None ☐ DK				0 ☐ No charge, from doctor; 1 ☐ Self or spouse; 4 ☐ Insurance; 5 ☐ Welfare; e.g., Medicaid; ☐ Other – *Specify*
	(2)		_____ ☐ None ☐ DK				0 ☐ No charge, from doctor; 1 ☐ Self or spouse; 4 ☐ Insurance; 5 ☐ Welfare; e.g., Medicaid; ☐ Other – *Specify*
	(3)		_____ ☐ None ☐ DK				0 ☐ No charge, from doctor; 1 ☐ Self or spouse; 4 ☐ Insurance; 5 ☐ Welfare; e.g., Medicaid; ☐ Other – *Specify*
	(4)		_____ ☐ None ☐ DK				0 ☐ No charge, from doctor; 1 ☐ Self or spouse; 4 ☐ Insurance; 5 ☐ Welfare; e.g., Medicaid; ☐ Other – *Specify*
	(5)		_____ ☐ None ☐ DK				0 ☐ No charge, from doctor; 1 ☐ Self or spouse; 4 ☐ Insurance; 5 ☐ Welfare; e.g., Medicaid; ☐ Other – *Specify*
	(6)		_____ ☐ None ☐ DK				0 ☐ No charge, from doctor; 1 ☐ Self or spouse; 4 ☐ Insurance; 5 ☐ Welfare; e.g., Medicaid; ☐ Other – *Specify*
	(7)		_____ ☐ None ☐ DK				0 ☐ No charge, from doctor; 1 ☐ Self or spouse; 4 ☐ Insurance; 5 ☐ Welfare; e.g., Medicaid; ☐ Other – *Specify*
	(8)		_____ ☐ None ☐ DK				0 ☐ No charge, from doctor; 1 ☐ Self or spouse; 4 ☐ Insurance; 5 ☐ Welfare; e.g., Medicaid; ☐ Other – *Specify*
	(9)		_____ ☐ None ☐ DK				0 ☐ No charge, from doctor; 1 ☐ Self or spouse; 4 ☐ Insurance; 5 ☐ Welfare; e.g., Medicaid; ☐ Other – *Specify*
	(10)		_____ ☐ None ☐ DK				0 ☐ No charge, from doctor; 1 ☐ Self or spouse; 4 ☐ Insurance; 5 ☐ Welfare; e.g., Medicaid; ☐ Other – *Specify*
	(11)		_____ ☐ None ☐ DK				0 ☐ No charge, from doctor; 1 ☐ Self or spouse; 4 ☐ Insurance; 5 ☐ Welfare; e.g., Medicaid; ☐ Other – *Specify*

(*If any medicine received directly from a doctor, ask*):

7. Which of the medicines that you got from a doctor did he charge you for? _____ Line number(s) ☐ None

Footnotes

Section VI – MEDICAL EXPENSES REPORT (*To be asked when specified by office*)

1. Excluding any charges for hospital room and board, prescription medicines, eyeglasses, dentures and hearing aids, ABOUT how much do you think was the total of your bills for doctors and other medical services for the period from –– through ––? 1 Dollars $ _____ Cents _____ ☐ DK — *If $60.00 or less – STOP. If more than $60.00 ask 4*

2. Do you think that the bills total more than $60.00? ☐ Y (4) ☐ N 9 ☐ DK

3. Could you estimate how much the bills were? EST 2 Dollars $ _____ Cents _____ 3 ☐ DK

(*Do not ask for cases with Part A Medicare hospital insurance only; i.e., B–O and B–A cases.*)

4. Have any of these bills been sent to Medicare either by you or someone else? 4 ☐ Y 5 ☐ N 6 ☐ DK

FORM CMS-I (7-28-75)

☆ U.S. GOVERNMENT PRINTING OFFICE: 1975—0-591-087

☆ U.S. GOVERNMENT PRINTING OFFICE: 1981 — 720-018/4470 REGION 3-1

Health Care Financing Program Statistics

U.S. Department of Health and Human Services
Richard R. Schweiker, **Secretary**

Health Care Financing Administration
Paul R. Willging, **Acting Administrator**

Office of Research, Demonstrations, and Statistics
James M. Kaple, **Acting Director**

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Karen Pelham O'Steen, **Research Publications Coordinator**

Donna L. Eskow, **Writer-editor**
Carol J. Pianalto, **Writer-editor**
Alice L. Young, **Writer-editor**
Cynthia Dingle, **Editorial Assistant**

Send changes of address or requests for this publication to: ORDS Publications, Rm 1E9 Oak Meadows Building, 6340 Security Blvd., Baltimore, MD 21235.

DEPARTMENT OF
HEALTH AND HUMAN SERVICES
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U.S. Department of
Health and Human Services
Health Care Financing Administration
HHS Publication
HCFA Pub. No. 03080
March 1981